

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An ~~electroporation~~ electroporation device comprising:
  - an electrode assembly having a plurality of needle electrodes for penetrating a selected tissue and delivering an electrical pulse;
  - a current waveform generator in electrical communication with the plurality of needle electrodes, the waveform generator being capable of generating the electrical pulse;
  - a power source in electrical communication with the current waveform generator;
  - a controller in communication with the current waveform generator and the power source; and
  - a waveform logger in communication with the controller;wherein the controller is capable of managing the electroporation device to expose tissue adjacent to the needle electrodes to a substantially constant current independent of any resistance change in the selected tissue during the electrical pulse, the controller is capable of sampling and monitoring the electroporation voltage and current waveforms, and the waveform logger is capable of recording the electroporation voltage and current waveforms.
2. (Canceled)
3. (Previously Presented) The device of claim 1, further comprising an impedance tester in electrical communication with the plurality of needle electrodes.
4. (Previously Presented) The device of claim 1, further comprising an input device for inputting commands into the controller.
5. (Previously Presented) The device of claim 4, wherein the input device is a keypad.

6. (Previously Presented) The device of claim 1, further comprising a status-reporting device for reporting status information during the electroporation procedure.
7. (Previously Presented) The device of claim 6, wherein the status-reporting device is an information display panel, an audible notification, a light-emitting diode ("LED"), or a combination thereof.
8. (Previously Presented) The device of claim 1, further comprising a communications port in communication with the controller.
9. (Previously Presented) The device of claim 8, wherein the communications port is an optical serial communications port.
10. (Previously Presented) The device of claim 8, wherein the communications port is an infrared port.
11. (Previously Presented) The device of claim 1, further comprising memory in communication with the controller.
12. (Previously Presented) The device of claim 11, wherein the memory is non-volatile.
13. (Previously Presented) The device of claim 1, wherein the power source is a battery.
14. (Previously Presented) The device of claim 1, wherein the electrode assembly further comprises a handle to which the plurality of needle electrodes are fastened.
15. (Previously Presented) The device of claim 14, wherein the electrode assembly further comprises an activation switch mounted on the handle and in communication with the controller.

16-17. (Canceled)

18. (Previously Presented) The device of claim 1, wherein the plurality of needle electrodes defines a circular array.

19. (Previously Presented) The device of claim 18, wherein the circular array is about 1.0 cm in diameter.

20-26. (Canceled)

27. (Currently Amended) A method for electroporating cells of a selected tissue to facilitate the introduction of macromolecules, comprising:

- programming an electrical pulse pattern into a controller of an electroporation device, wherein the electroporation device comprises:

- an electrode assembly having a plurality of needle electrodes for penetrating a selected tissue and delivering an electrical pulse;

- a current waveform generator in electrical communication with the plurality of needle electrodes, the waveform generator being capable of generating the electrical pulse;

- a power source in electrical communication with the current waveform generator;

- a controller in communication with the current waveform generator and the power source; and

- a waveform logger in communication with the controller;

- wherein the controller is capable of managing the electroporation device to expose the selected tissue to a substantially constant current independent of any resistance change in the selected tissue during the electrical pulse, the controller is capable of sampling and monitoring the electroporation voltage and current

waveforms, and the waveform logger is capable of recording the electroporation voltage and current waveforms;

inserting the plurality of needle electrodes of the electrode assembly into the selected tissue, the electrode assembly having a central channel;

measuring the resistance of the plurality of needle electrodes to determine if a circuit can safely be established through the selected tissue;

injecting a solution of the macromolecules into the selected tissue by passing a syringe needle through the central channel and centrally related to the plurality of needle electrodes;

generating a pulse of electrical energy from the waveform generator in accordance with the programmed electrical pulse pattern; and

applying the pulse of electrical energy to the plurality of needle electrodes in accordance with the programmed electrical pulse pattern for a time and under conditions effective to expose the selected tissue to a substantially constant electrical current.

28. (Previously Presented) The method of claim 27, further comprising electronically recording data related to the electroporation through a waveform logger in communication with the controller.

29. (Currently Amended) An ~~electroporation~~ electroporation device comprising:  
an electrode assembly having an electrode disk comprising a plurality of needle electrodes for penetrating a selected tissue and delivering an electrical pulse;  
a current waveform generator in electrical communication with the plurality of needle electrodes, the waveform generator being capable of generating the electrical pulse;  
a power source in electrical communication with the current waveform generator;  
a controller in communication with the current waveform generator and the power source, wherein the controller is comprised of firmware;

and

a waveform logger in communication with the controller;

wherein the controller is capable of sampling and monitoring the electroporation voltage and current waveforms, and the waveform logger is capable of recording the electroporation voltage and current waveforms, and the firmware is capable of managing the waveforms generated by the waveform generator to expose tissue adjacent to the needle electrodes to a substantially constant current independent of any resistance change in the selected tissue during the electrical pulse.

30. (Previously Presented) The electroporation device of claim 29, wherein the electrode disk is a replaceable disk.

31. (Previously Presented) The electroporation device of claim 29, wherein the plurality of needle electrodes are spatially arranged in a circular array.